SI)I?CTRAI.-CI. OSSIFICATION STUDY OF COSMIC GAMMA-RAY SOURCES FROM 30 TO 1800 keV

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Using data from the Jet Propulsion Laboratory's Earth-occultation program to extract spectra and source intensities from the Burst and Transient Source Experiment on the Compton Observatory we have undertaken a statistical study of the spectral properties of as many as 30 of the strongest sources of low-energy gamma rays forming a reasonably homogeneous sample of objects. This paper discusses the possible classification of sources according to the genera] features of their spectra in an objective way, the extent to which the sources fall into related clusters or simply display a continuum of characteristics, the properties of any such clusters, and the relation of the noted spectral features to other parameters such as location on the sky and temporal beh avior. We present the results of initial studies and of their further refinements and discuss their physical implications.

Oral presentation preferred.

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